

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-21. (canceled)

22. (previously presented) In an apparatus comprising a dividing wall distillation column, the column having a shell defining a middle vapor-liquid contacting area containing at least one vertically oriented partition dividing the middle vapor-liquid contacting area into at least a feed section defined by the shell and the partition and a sidedraw section defined by the shell and the partition, an upper vapor-liquid contacting area being above and in communication with the middle vapor-liquid contacting area, and a lower vapor-liquid contacting area being below and in communication with the middle vapor-liquid contacting area, the column having a first inlet port in communication with the upper vapor-liquid contacting area, a second inlet port in communication with the feed section, and an outlet port in communication with the sidedraw section, the improvement comprising
- a) a temperature measuring device operably connected to the column to measure temperature in the column and to establish a temperature signal representative of temperature in the column, wherein the temperature measuring device is vertically spaced above the outlet port;
 - b) a controller to receive a controller input signal responsive to the temperature signal, to compare the controller input signal to a set point, and to establish a controller output signal responsive to the difference between the controller input signal and the set point; and
 - c) a means for adjusting temperature in the column, the means being responsive to the controller output signal, wherein the upper vapor-liquid contacting area is in communication with a contact condenser and the means for adjusting temperature comprises a valve operably located to control the flow of a cooling medium to the contact condenser.

23. (previously presented) An apparatus comprising
- a) a distillation column having a shell defining a middle vapor-liquid contacting area, an upper vapor-liquid contacting area above and in communication with the middle vapor-liquid contacting area, and a lower vapor-liquid contacting area below and in communication with the middle vapor-liquid contacting area;
 - b) at least one vertically oriented partition dividing the middle vapor-liquid contacting area into at least a feed section defined by the shell and the partition and a sidedraw section defined by the shell and the partition;
 - c) a first inlet port in communication with the upper vapor-liquid contacting area;
 - d) a second inlet port in communication with the feed section;
 - e) an outlet port in communication with the sidedraw section;
 - f) a temperature measuring device operably connected to the column to measure temperature in the column and to establish a temperature signal representative of temperature in the column, wherein the temperature measuring device is vertically spaced above the outlet port;
 - g) a controller to receive a controller input signal responsive to the temperature signal, to compare the controller input signal to a set point, and to establish a controller output signal responsive to the difference between the controller input signal and the set point; and
 - h) a means for adjusting temperature in the column, the means being responsive to the controller output signal, wherein the upper vapor-liquid contacting area is in communication with a contact condenser, and the means for adjusting temperature comprises a valve operably located to control the flow of a cooling medium to the contact condenser.
24. (canceled)